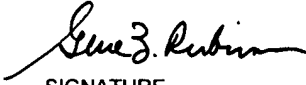


FORM PTO-1390		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 050389-0058
<b>TRANSMITTAL LETTER TO THE UNITED STATES          DESIGNATED/ELECTED OFFICE (DO/EO/US)          CONCERNING A FILING UNDER 35 U.S.C. 371</b>			U.S. APPLIC. NO. (if known, see 37 CFR 1.5) 10/526,471
INTERNATIONAL APPLICATION NO PCT/JP2004/002840	INTERNATIONAL FILING DATE March 5, 2004	PRIORITY DATE CLAIMED March 7, 2003	
TITLE OF INVENTION LOGICAL OPERATION ELEMENT EMPLOYING A FIELD EMISSION TYPE MICROFABRICATED ELECTRON EMITTER AND LOGICAL OPERATION CIRCUIT			
APPLICANTS FOR DO/EO/US Natsuo TATSUMI			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1.	<input type="checkbox"/>	This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.	
2.	<input checked="" type="checkbox"/>	This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.	
3.	<input type="checkbox"/>	This express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.	
4.	<input type="checkbox"/>	The US has been elected (Article 31).	
5.	<input type="checkbox"/>	A copy of the International Application as filed (35 U.S.C. 371(c)(2)) a. <input type="checkbox"/> is attached herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)	
6.	<input type="checkbox"/>	An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).	
7.	<input type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) a. <input type="checkbox"/> are attached hereto (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendment has NOT expired. d. <input type="checkbox"/> have not been made and will not be made.	
8.	<input type="checkbox"/>	An English translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).	
9.	<input type="checkbox"/>	An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).	
10.	<input type="checkbox"/>	An English translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).	
Items 11. to 16. below concern other document(s) or information included:			
11.	<input checked="" type="checkbox"/>	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.	
12.	<input type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.	
13.	<input type="checkbox"/>	A preliminary amendment.	
14.	<input type="checkbox"/>	An Application Data Sheet under 37 CFR 1.76.	
15.	<input type="checkbox"/>	A substitute specification.	
16.	<input type="checkbox"/>	A power of attorney and/or change of address letter.	
17.	<input type="checkbox"/>	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825.	
18.	<input type="checkbox"/>	A second copy of the published International Application under 35 U.S.C. 154(d)(4).	
19.	<input checked="" type="checkbox"/>	Response to Notice of Non-Compliant Amendment with Signed Preliminary Amendment	
20.	<input checked="" type="checkbox"/>	Other items or information. International Preliminary Examination Report (Form PCT/IB/338)	

U.S. APPLIC. NO. (if known, see 37 CFR 1.50) 10/526,471		INTERNATIONAL APPLICATION NO. PCT/JP2004/002840		ATTORNEY'S DOCKET NUMBER 050389-0058	
				<b>CALCULATIONS</b>	<b>PTO USE ONLY</b>
21. <input checked="" type="checkbox"/> The following fees are submitted:					
<input checked="" type="checkbox"/> Basic National Stage Fee		\$300		\$	
22. <input checked="" type="checkbox"/> Examination Fee If the written opinion prepared by ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) All other situations				\$0 \$200	\$
23. <input checked="" type="checkbox"/> Search Fee (37CFR 1.492(b))  If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB All other situations				\$0 \$100 \$400 \$500	\$
<b>TOTAL OF 21, 22 and 23 =</b>				\$	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.				\$	
Total Sheets	Extra Sheets	Number of each additional 50 or fraction Thereof (round up to a whole number)	RATE		
-100	/50=		X\$250	\$	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	-20 =		x \$50.00	\$	
Independent Claims	-3 =		x \$200.00	\$	
Multiple dependent claim(s) (if applicable)			+ \$360.00	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				\$	
<b>SUBTOTAL =</b>				\$	
Processing fee of \$130.00 for furnishing the English translation later than the 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+	\$
<b>TOTAL NATIONAL FEE =</b>					
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+	\$
<b>TOTAL FEES ENCLOSED =</b>				\$0.00	
				Amount to be refunded	\$
				Amount to be charged	\$0.00
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>500417</u> in the amount of \$ <u>0.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>500417</u>. A duplicate copy of this sheet is enclosed.</p> <p><b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b></p> <p>SEND ALL CORRESPONDENCE TO:</p> <p>Customer Number 20277 Telephone: 202.756.8000 Facsimile: 202.756.8087</p> <p style="text-align: right;">   SIGNATURE  Gene Z. Robinson  NAME  33,531  REGISTRATION NUMBER </p> <p>Date: April 14, 2006</p>					

**Notice of Non-Compliant  
Amendment (37 CFR 1.121)**

Application No.

10/526471

Examiner

Applicant(s)

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 3 March 2005 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_
- ☐ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☐ E. Other: \_\_\_\_\_
- ☒ 5. The amendment is unsigned or not signed in accordance with 37 CFR 1.4.

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714 and the USPTO website at <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf>.

**TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:**

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted within the time period set forth in the final Office action.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121 or 1.4, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

*Renee Hawkins*

Legal Instruments Examiner (LIE)

*571-272-1581*

Telephone No.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of	:	Customer Number: 20277
	:	
Natsuo TATSUMI	:	Confirmation Number: 1865
	:	
Application No.: 10/526,471	:	Group Art Unit: 2821
	:	
Filed: March 03, 2005	:	Examiner: Not yet assigned
	:	

For: LOGICAL OPERATION ELEMENT EMPLOYING A FIELD EMISSION TYPE  
MICROFABRICATED ELECTRON EMITTER AND LOGICAL OPERATION CIRCUIT

**RESPONSE TO NOTICE OF NON-COMPLIANT AMENDMENT**

Mail Stop  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Notice of Non-Compliant Amendment dated March 14, 2006,  
submitted herewith are the following for filing in the above-referenced application:

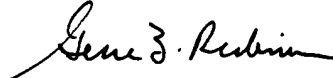
1. Signed copy of the Preliminary Amendment dated March 3, 2005

In the event that anything further is needed please contact the undersigned immediately.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R.  
1.136. Please charge any shortage in fees due in connection with the filing of this paper,  
including extension of time fees, to Deposit Account 500417 and please credit any excess fees  
to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Gene Z. Robinson  
Registration No. 33,351

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 GZR:aph  
Facsimile: 202.756.8087  
**Date: April 14, 2006**

**Please recognize our Customer No. 20277  
as our correspondence address.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,471	03/03/2005	Natsuo Tatsumi	50389-058	1865

20277 7590 03/14/2006

MCDERMOTT WILL & EMERY LLP,  
600 13TH STREET, N.W.  
WASHINGTON, DC 20005-3096

EXAMINER
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ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Docket No.: 50389-058

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of	:	Customer Number: 20277
Natsuo TATSUMI, et al.	:	Confirmation Number: Not yet assigned
Application No.: Not yet assigned	:	Group Art Unit: Not yet assigned
Filed: March 03, 2005	:	Examiner: Not yet assigned

For: LOGICAL OPERATION ELEMENT EMPLOYING A FIELD EMISSION TYPE  
MICROFABRICATED ELECTRON EMITTER AND LOGICAL OPERATION CIRCUIT

**PRELIMINARY AMENDMENT**

Mail Stop Preliminary Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Prior to examination of the above-referenced application, please amend the application as follows:

**Amendments to the Specification** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 3 of this paper.

**IN THE SPECIFICATION:**

*Please amend the paragraph beginning on page 7 at line 10:*

-- [0042]      ~~Figure 12 is a view~~ Figures 12(a) and 12(b) are views showing an example of a logical operation circuit according to the present invention, having a design in which electrodes of different elements are arranged in the same plane; and--

**REMARKS**

The specification has been amended so as to correct minor inadvertent errors in the specification. No new matter has been added. Entry of this preliminary amendment is respectfully requested.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Arthur J. Steiner

Registration No. 26,106

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 AJS:blg  
Facsimile: 202.756.8087  
**Date: March 3, 2005**

**Please recognize our Customer No. 20277  
as our correspondence address.**